Claims

We Claim

1. A system for processing a color image in a printing machine having color rendering characteristics comprising:

an image processor for generating color image data from an original item to be printed;

said system further comprising a customization manager comprising:

a customization user interface adapted to allow a user to enter data relative to customized tone reproduction curves;

a customization processor constructed to receive the data entered by said user at said customization interface and generate at least one set of customized tone reproduction curves;

a customization memory for storing said at least one set of customized tone reproduction curves for future use; and

wherein said processors are connected to combine said customized tone reproduction curves with said original color image data to generate customized color image data.

2. A system for processing a color image in a printing machine having color rendering characteristics, as described

in claim 1, further comprising a color maintenance processor including a memory for storing ~~at least~~ one set of calibration tone reproduction curves and wherein said color maintenance processor combines said customized color image data with said calibration tone reproduction curve to generate calibrated customized color image data.

3. A system for processing a color image in a printing machine having color rendering characteristics, as described in claim 1 wherein the set of customized tone reproduction curves are stored in said customization memory supported by named reference to create a library of customized tone reproduction curves which is accessible for flexible use.

4. A system for processing a color image in a printing machine having color rendering characteristics, as described in claim 1 wherein said customized color image data are stored prior to calibration for future use and calibration.

5. A system for processing a color image in a printing machine having color rendering characteristics, as described in claim 1 further comprising a general user interface for operating said printing machine, wherein said customization user interface is presented as part of said general user interface.

6. A system for processing a color image in a printing machine having color rendering characteristics, as described in claim 1 further comprising a computer network in which said customization user interface is adapted for use on a personal computer which is connected to said computer network.

7. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said

image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said color image data to compensate for said color rendering characteristics; said customization system comprising:

a customization user interface adapted to allow a user to enter data relative to customized tone reproduction curves;

a customization processor constructed to receive the data entered by said user at said customization interface and generate at least one set of customized tone reproduction curves;

a customization memory for storing said customized tone reproduction curves for future use; and

wherein said processors are connected to combine said customized tone reproduction curves with said original color image data to generate customized color image data.

8. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics; said customization system, as described in claim 7, further comprising a color maintenance processor including a memory for storing at least one set of calibration tone reproduction curves and wherein

said color maintenance processor combines said customized color image data with said calibration tone reproduction curve to generate calibrated customized color image data.

9. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics; said customization system, as described in claim 7, wherein said at least one set of customized tone reproduction curves is stored in said customization memory supported by named reference to create a library of customized tone reproduction curves which are accessible for flexible use.

10. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics; said customization system, as described in claim 7, wherein said customized color image data are stored prior to calibration for future use and calibration.

11. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for

said color rendering characteristics; said customization system, as described in claim 7, further comprising a general user interface for operating said printing machine, wherein said customization user interface is presented as part of said general user interface.

12. A customization system for generating independent tone reproduction curves for use in an image processing system of a printing machine having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics; said customization system, as described in claim 7, further comprising a computer network connected with said printing machine in which said customization user interface is adapted for use on a personal computer which is connected to said computer network.

13. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system comprising the steps of:

generating data representing a color image from an original item to be printed;

entering data relative to customized tone reproduction curves;

processing said entered data and generating at least one set of customized tone reproduction curves;

storing said customized tone reproduction curves for future retrieval and use; and

processing said customized tone reproduction curves by combining said customized curves with said said color image data to generate customized color image data.

14. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 13, further comprising the steps of:

generating at least one set of calibration tone reproduction curves;

storing said calibration tone reproduction curves; and

calibrating said customized color image data by combining said data with said calibration tone reproduction curves to generate calibrated customized color image data.

15. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining

calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 13, wherein the customized tone reproduction curves are stored in said customization memory supported by named reference to create a library of customized tone reproduction curves which is accessible for flexible use.

16. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 13, further comprising the step of storing said customized color image data, prior to calibration, for future use and calibration.

17. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 13, wherein the step of entering customized image data is accomplished at a customization user interface that is presented as part of general user interface for operating said printing machine.

18. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 13, wherein the step of entering customized image data is accomplished at a personal computer which is connected to a computer network which includes said printing machine.

19. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 14, wherein said calibration tone reproduction curve is combined with said customized tone reproduction curve.

20. In an image processing system of a printing machine, having color rendering characteristics, said image processing system having a color maintenance processor for combining calibration tone reproduction curves with color image data, and adjusting said image data to compensate for said color rendering characteristics, a customization method for generating customized tone reproduction curves for use in said image processing system, as described in claim 14, wherein said calibration tone reproduction curve is combined with said image color data and the resulting calibrated color image data

is combined with said customized tone reproduction curve to obtain customized, calibrated color image data.